



Volume 54 | Issue 5

Article 1

2009

Working without a Net: The Third Circuit Juggles Skepticism and Deference inside the Ring of Products Liability Experts after the Daubert Trilogy in *Pineda v. Ford Motor Co.* & (and) *Calhoun v. Yamaha Corp.*

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Recommended Citation

Jennifer E. Burke, *Working without a Net: The Third Circuit Juggles Skepticism and Deference inside the Ring of Products Liability Experts after the Daubert Trilogy in Pineda v. Ford Motor Co. & (and) Calhoun v. Yamaha Corp.*, 54 Vill. L. Rev. 703 (2009).

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VILLANOVA LAW REVIEW

VOLUME 54

2009

NUMBER 5

Issues In The Third Circuit

WORKING WITHOUT A NET: THE THIRD CIRCUIT JUGGLES
SKEPTICISM AND DEFERENCE INSIDE THE RING OF
PRODUCTS LIABILITY EXPERTS AFTER THE
DAUBERT TRILOGY IN *PINEDA V.*
FORD MOTOR CO. & CALHOUN V. YAMAHA CORP.

“Take nothing on its looks; take everything on evidence.
There’s no better rule.”—Charles Dickens¹

I. DIMMING THE LIGHTS

The bone-chilling sounds of glass shattering, cars skidding off the road, and personal watercrafts colliding can only provide so much insight into how products used for work and play betray their users.² After the dust settles, plaintiffs bringing products liability claims often employ experts to prove that the product in question was defective and caused their tragic accidents.³ Although a variety of cases involve experts, expert testimony is especially critical in products liability cases because claims will generally fail, often at the summary judgment stage, without expert testimony to establish defectiveness.⁴ Due to significant changes in federal evi-

1. CHARLES DICKENS, *GREAT EXPECTATIONS* 334 (Stanley Weintraub ed., Signet Classic 1998) (1860).

2. See JOHN B. CONLEY & JANE CAMPBELL MORIARTY, *SCIENTIFIC AND EXPERT EVIDENCE* 463 (2007) (illustrating how expert testimony aims to provide insight into how products liability accidents occur).

3. See DAVID G. OWEN, *PRODUCTS LIABILITY LAW* 332 (2005) (explaining that products liability law focuses on whether products are defective).

4. See *Oddi v. Ford Motor Co.*, 234 F.3d 136, 140 (3d Cir. 2000) (affirming grant of summary judgment to defendants after plaintiff’s expert was excluded); see also DAVID S. CAUDILL & LEWIS H. LARUE, *NO MAGIC WAND: THE IDEALIZATION OF SCIENCE IN LAW* xiii (2007) (pointing out that expert testimony is used in three out of every four cases); OWEN, *supra* note 3, at 355 (explaining that expert testimony is necessary in products liability cases to establish defectiveness); Sofia Adrogo, *The Care and Feeding of Experts: Accountants, Lawyers, Investment Bankers, and Other Non-Scientific Experts*, 47 S. TEX. L. REV. 881, 886 (2006) (observing that challenges to expert testimony early in litigation are often successful); Jonathan D. Glater, *More and More, Expert Witnesses Make the Difference*, N.Y. TIMES, Aug. 19, 2005,

dence law over the past two decades, district courts now determine the admissibility of expert testimony and cases are essentially decided before trial.⁵

Expert testimony in products liability cases is vital for educating the trier of fact because defectiveness usually extends beyond an average person's knowledge.⁶ Plaintiffs frequently allege one or more of the following claims about the defective product: 1) design defects; 2) manufacturing defects; or 3) inadequate warnings.⁷ First, although the law may vary among jurisdictions, a manufacturing defect generally occurs when a finished product has an unintended production defect.⁸ Second, a design defect is the result of a defectively designed product that could have been constructed more safely had the manufacturer employed an alternative design.⁹ Finally, a product can also be deemed defective due to inadequate warnings if the risk of harm would be reduced by reasona-

<http://www.cnytimes.com/2005/08/19/business/19legal.html> (noting prevalence of expert testimony in variety of cases).

5. See CECIL C. KUHNE, A LITIGATOR'S GUIDE TO EXPERT WITNESSES ix (2006) (stating that adequacy of expert testimony is often determining factor for whether case is tried); see also David E. Bernstein, *Expert Witnesses, Adversarial Bias, and the (Partial) Failure of the Daubert Revolution*, 93 IOWA L. REV. 451, 452 (2008) (reasoning that "the emergence of the *Daubert*-[Rule] 702 reliability test . . . is likely the most radical, sudden and consequential change in the modern history of the law of evidence"). For a discussion of the substantive changes in evidence law impacting admissibility of expert testimony, see *infra* notes 21-42 and accompanying text.

6. See BRUCE D. SALES & DANIEL W. SHUMAN, EXPERTS IN COURT: RECONCILING LAW, SCIENCE, AND PROFESSIONAL KNOWLEDGE 5 (2005) (explaining that expert testimony can supply jury with adequate knowledge to decide issue in case); OWEN, *supra* note 3, at 353-54 (noting that experts in products liability cases serve important role because judges and juries depend on experts' technical knowledge to resolve main issue of defectiveness).

7. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998) ("A product is defective when, at the time of sale or distribution, it contains a manufacturing defect, is defective in design, or is defective because of inadequate instructions or warnings . . .").

8. See *id.* ("A product contains a manufacturing defect when the product departs from its intended design . . ."); see also OWEN, *supra* note 3, at 484 (explaining that manufacturing defect alleges "some fault in the production process whereby a particular product deviates from the manufacturer's own 'blueprint' specifications").

9. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 ("A product is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller . . ."); see also OWEN, *supra* note 3, at 484 (clarifying that design defect claim is based on allegation that product's specifications are unsafe). Claims arising from design defects are the most common in products liability cases. See OWEN, *supra* note 3, at 484 (noting prevalence of design defect claims). Because design defect claims often require proof of an alternative design, expert testimony is almost always necessary to prove the existence of a reasonable alternative design. See *id.* at 356 (stating that expert testimony is needed to explain feasibility of alternative designs). Design defect claims are based on the allegation that an entire product line is defective. See *id.* at 484 (commenting that design defect claims are most potentially damaging to manufacturers).

ble instructions accompanying the product.¹⁰ As expert testimony in these cases has become more ubiquitous, inconsistency subsequently developed because judges must interpret Supreme Court precedent absent sufficient guidance as to how Federal Rule of Evidence 702 applies to products liability experts.¹¹ As a result, appellate courts function as ring-leaders in a circus of potentially spurious expert testimony by juggling deference to district courts and the need to ensure admissibility of reliable evidence.¹²

This Casebrief examines the Third Circuit's attempt to balance Supreme Court teachings regarding expert testimony with the nuanced considerations that uniquely impact expert testimony in products liability cases.¹³ Part II details the framework of Supreme Court decisions addressing admissibility of expert testimony.¹⁴ Part III surveys the Third Circuit's traditional treatment of the qualification and reliability requirements of expert testimony in products liability cases, as well as the Third Circuit's response to evolving Supreme Court precedent.¹⁵ Part IV analyzes the Third Circuit's recent decisions in *Pineda v. Ford Motor Co.*¹⁶ and *Calhoun v. Yamaha Corp.*,¹⁷ both illustrative of the court's current approach to qualification and reliability, and surveys the reasoning of other circuit courts in similar cases.¹⁸ Part V offers suggestions to practitioners aiming to admit or exclude expert testimony in products liability cases at the trial and appellate levels.¹⁹ Finally, Part VI reiterates the importance of Third Circuit

10. See RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 ("A product is defective because of inadequate instructions or warnings when the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions . . ."); see also OWEN, *supra* note 3, at 564 (articulating that duty to warn encompasses both duty to inform buyers of hidden dangers as well as duty to inform buyers how to avoid such dangers).

11. See SALES & SHUMAN, *supra* note 6, at 43 (contending that difficulty in implementing Supreme Court's teachings leads to inconsistency in admissibility decisions); Xavier Pena, Note, *The Effective Evaluation of Expert Reliability*, 20 REV. LITIG. 743, 764 (2001) (observing that federal courts have used different factors to evaluate reliability of experts).

12. For a discussion of the appellate courts' role in admitting evidence, see *infra* notes 43-112 and accompanying text.

13. For a discussion of the Third Circuit's recent approach to admissibility, see *infra* notes 60-96 and accompanying text.

14. For a discussion of the framework of Supreme Court decisions, see *infra* notes 23-42 and accompanying text.

15. For a discussion of the development of the Third Circuit's qualification and reliability standards of expert testimony, see *infra* notes 43-59 and accompanying text.

16. 520 F.3d 237 (3d Cir. 2008).

17. 350 F.3d 316 (3d Cir. 2003).

18. For a discussion of the Third Circuit's current approach and those of other circuits, see *infra* notes 60-112 and accompanying text.

19. For suggestions to practitioners, see *infra* notes 113-38 and accompanying text.

treatment of expert testimony in products liability cases, given the small chance that the Supreme Court will revisit this particular issue.²⁰

II. SPOTLIGHT ON THE SUPREME COURT

A. General Acceptance and Daubert Showcased

The standards for admissibility of expert testimony have significantly changed in response to Supreme Court precedent and the adoption and revision of the Federal Rules of Evidence.²¹ Prior to enactment of the Federal Rules of Evidence, admissibility of expert testimony in federal cases hinged on whether the particular technique the expert employed was “generally accepted” in the relevant scientific community.²² The Supreme Court, however, rejected this test in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,²³ stating that it was inappropriate after the adoption of Federal Rule of Evidence 702.²⁴

The Court then adopted a novel methodology for the admissibility of a plaintiff’s expert testimony and directed that the trial judge must determine if the offered testimony is relevant and reliable under Rule 702.²⁵

20. For a discussion of conclusions regarding the Third Circuit’s treatment of expert testimony, see *infra* notes 139-42 and accompanying text.

21. For a discussion of changes in admissibility of expert testimony in response to Supreme Court decisions and the Federal Rules of Evidence, see *infra* notes 21-42 and accompanying text.

22. See *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923) (finding expert testimony inadmissible unless it gained general acceptance in scientific community).

23. 509 U.S. 579 (1993).

24. See *id.* at 587 (finding that “the *Frye* test was superseded by the adoption of the Federal Rules of Evidence”). Petitioners sought to introduce several experts at trial to testify that the anti-nausea drug Bendectin caused birth defects. See *id.* at 582-83 (setting forth factual background of case). In contrast with the prevalent human studies of the drug, these experts derived their conclusions from an approach based on animal studies. See *id.* (noting difference between methodologies of experts). The Court found the omission of the general acceptance test from Rule 702 and the advisory committee notes to be significant. See *id.* at 587 (noting that “[n]othing in the text of the Rule establishes ‘general acceptance’ as an absolute prerequisite to admissibility”); see also FED. R. EVID. 702 advisory committee’s note; Effie J. Chan, Note, *The “Brave New World” of Daubert: True Peer Review, Editorial Peer Review, and Scientific Validity*, 70 N.Y.U. L. REV. 100, 108-09 (1995) (recognizing that many courts considered Rule 702 to exclude general acceptance requirement due to absence of standard from text of rule and advisory committee notes); Leslie Morsek, Comment, *Get on Board for the Ride of Your Life! The Ups, the Downs, the Twists, and the Turns of the Applicability of the “Gatekeeper” Function to Scientific and Non-Scientific Expert Evidence: Kumho’s Expansion of Daubert*, 34 AKRON L. REV. 689, 701-03 (2001) (observing that Congress’s silence on general acceptance in rules or advisory committee notes created confusion about its applicability).

25. See *Daubert*, 509 U.S. at 584 (drawing distinction between bases of majority of Bendectin studies and methodology of petitioners’ experts). The Ninth Circuit affirmed the district court’s exclusion of the testimony and found that the expert studies used different approaches than those of other scientists in the field and, therefore, these studies could not satisfy the general acceptance test. See *id.* (explaining appellate court’s reasoning). Departing from the general acceptance test,

To aid in this reliability assessment, the Court offered several “general observations” that a trial court should consider in its “gate-keeping role,” such as whether the theory can be and has been tested, whether the theory has been subject to peer review and publication, the known or potential rate of error, and whether the theory has been generally accepted in the relevant scientific community.²⁶

B. *The Supreme Court Lets Daubert Out of Its Cage and the Advisory Committee Works Its Magic*

Despite the Court’s attempt to clarify the standard for admissibility of expert testimony, the *Daubert* decision created widespread confusion among judges and practitioners in the application of the “general observations” and the new “gate-keeping role” of trial judges.²⁷ Specifically, *Daubert*’s discussion of admissibility of scientific testimony failed to provide guidance to the admittance of non-scientific expert testimony.²⁸ Furthermore, the Court’s designation of trial judges as “gate-keepers” drastically altered the trial court’s role and accordingly posed the question of how appellate courts should review the admissibility determination.²⁹

the Court specified that “in order to qualify as ‘scientific knowledge,’ an inference or assertion must be derived by the scientific method” and the testimony must “assist the trier of fact to understand the evidence or to determine a fact in issue.” *Id.* (expounding on requirements of Rule 702). Accordingly, the Court explained that the trial court “must determine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.” *Id.* at 592 (setting forth role of trial judge).

26. *See id.* at 593-94 (listing factors that trial courts should consider in evaluating admissibility of expert testimony). The Court made it a point to emphasize that these factors are not a “definitive checklist or test.” *See id.* at 593 (noting limits of suggested factors). Interestingly, the Court retained vestiges of the *Frye* standard in allowing general acceptance to factor into the analysis. *See id.* at 594 (stating that “[w]idespread acceptance can be an important factor”). The Court also emphasized that the trial judge’s gate-keeping role should be flexible. *See id.* (explaining inquiry under Rule 702). Even so, the Court acknowledged that the approach under Rule 702 “inevitably on occasion will prevent the jury from learning of authentic insights and innovations.” *Id.* at 597 (recognizing that Rule 702 will not always admit useful evidence).

27. *See* Morsek, *supra* note 24, at 710 (reflecting on ambiguities after *Daubert*).

28. *See Daubert*, 509 U.S. at 590 n.8 (“Rule 702 also applies to ‘technical, or other specialized knowledge.’ Our discussion is limited to the scientific context because that is the nature of the expertise offered here.”); *see also* John Hein, Note, *When Reliable Is Reliable Enough: The Use of Expert Testimony After Kumho Tire v. Carmichael*, 6 WASH. U. J.L. & POL’Y 223, 226-27 (2001) (noting uncertainty among federal circuit courts regarding application of *Daubert* to non-scientific testimony); Cassandra H. Welch, Note, *Flexible Standards, Deferential Review: Daubert’s Legacy of Confusion*, 29 HARV. J.L. & PUB. POL’Y 1085, 1094-95 (2006) (finding that trial courts struggled with application of *Daubert* factors and suggesting that *Daubert* decision announced standard that is “actually a ‘more nebulous and less defined test’ than the test under *Frye*”).

29. *See* Major Victor Hansen, *Rule of Evidence 702: The Supreme Court Provides a Framework for Reliability Determinations*, 162 MIL. L. REV. 1, 18-19 (1999) (describing

In the late 1990s, the Court completed the “*Daubert* trilogy” with the decisions in *General Electric Co. v. Joiner*³⁰ and *Kumho Tire Co. v. Carmichael*.³¹ The combination of these cases provided guidance for trial and appellate courts.³² In *Joiner*, the Court decided that an abuse of discretion standard was appropriate in reviewing the district court’s admissibility ruling, reinforcing the idea that the district court’s *Daubert* inquiry should be flexible and appellate review should be deferential.³³

The Court further clarified *Daubert* in *Kumho Tire* when it addressed the application of *Daubert* to testimony of non-scientific experts, such as engineers.³⁴ The Court focused on whether a district court should apply *Daubert* in deciding the admissibility of an engineering expert and ultimately concluded that the gate-keeping inquiry applies to all types of ex-

responsibility of trial judges to make “detailed review” of scientific methodology as gatekeepers).

30. 522 U.S. 136 (1997).

31. 526 U.S. 137 (1999).

32. See CAUDILL, *supra* note 4, at 2 (remarking that decisions in *Daubert*, *Kumho Tire*, and *Joiner* are known as “*Daubert* trilogy” of evidence cases).

33. See 522 U.S. at 146-47 (describing appropriate standard of review). The respondent in *Joiner* filed suit alleging that his lung cancer resulted from exposure to harmful polychlorinated biphenyls (PCBs) contained in coolant fluid that he worked with as an electrician. See *id.* (setting forth facts of case). The respondent’s expert would have testified that despite the respondent’s history of smoking, PCB’s likely caused his cancer. See *id.* at 140 (detailing respondent’s claims). The district court criticized the expert’s study, which was based on exposure to PCB’s in mice, because the expert failed to demonstrate how the study could apply to respondent’s illness. See *id.* at 144 (recounting district court’s analysis).

The Court of Appeals for the Eleventh Circuit applied a “particularly stringent standard of review to the trial judge’s exclusion of expert testimony” and determined that the trial court had erred in excluding the testimony. See *id.* at 139-41 (reversing district court’s exclusion of expert testimony). The Supreme Court subsequently reversed the Eleventh Circuit, explaining that a “court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.” See *id.* at 146 (recognizing that trial courts do not necessarily have to accept expert opinions as valid conclusions); see also Pena, *supra* note 11, at 749 (observing that *Joiner* decision “reaffirmed the flexibility *Daubert* grants trial courts when reviewing and analyzing proposed expert testimony”); Welch, *supra* note 28, at 1096 (commenting that abuse of discretion standard of review and *Daubert* inquiry “appear[] to be in line with the ‘liberal thrust’ of the Federal Rules”).

34. See 526 U.S. at 141 (addressing applicability of *Daubert* to other types of expert testimony). The dispute in *Kumho Tire* centered on the admissibility of an engineer who the respondent offered as an expert in tire failure analysis after the tire on the respondent’s minivan blew out. See *id.* at 142-43 (describing plaintiff’s proffered expert). The expert opined that even though the tire was old and had two previous punctures, the blowout was attributable to a manufacturing or design defect. See *id.* at 143-45 (describing expert’s conclusions). Applying *Daubert*, the district court recognized that although the expert’s “visual-inspection method” may have achieved some acceptance in the engineering community, the expert’s methodology in analyzing the relevant data was still unreliable. See *id.* at 145-46 (reaffirming prior order to exclude expert’s testimony). The Eleventh Circuit reversed, reasoning that the Court in *Daubert* explicitly limited the inquiry to scientific testimony and therefore the district court misapplied the *Daubert* analysis. See *id.* at 146 (describing appellate court’s reason for reversal).

pert testimony under Rule 702.³⁵ The Court emphasized that the facts of a particular case determine the application of the *Daubert* factors and other reliability factors, such as whether the expert applied the “same intellectual rigor” in the courtroom as in the field.³⁶

As a result of the Court’s application of *Daubert* to all expert testimony, *Kumho Tire* expanded the gate-keeping responsibilities of trial courts to include evaluating the reliability of *all* expert testimony.³⁷ To

35. See *id.* at 147 (holding that district court’s responsibility under *Daubert* to determine that expert testimony is relevant and reliable applies to all expert testimony). Noting that Rule 702 does not distinguish between “scientific” and “technical or other specialized knowledge,” the Court reasoned that the *Daubert* standard was meant to apply to expert knowledge in general. See *id.* (acknowledging that *Daubert* limited its discussion to scientific testimony). The Court pointed out that the policy of ensuring the admissibility of reliable testimony announced in *Daubert* was similarly applicable to other types of expert testimony. See *id.* at 148 (reasoning that rationale of establishing standard of evidentiary reliability for scientific testimony also justified same standard for all expert testimony). The Court’s holding resolved a divisive split amongst the circuit courts as to the type of reliability analysis that district courts should apply to non-scientific expert testimony. See K. Issac deVyver, Comment, *Opening the Door But Keeping the Lights Off: Kumho Tire Co. v. Carmichael and the Applicability of the Daubert Test to Nonscientific Evidence*, 50 CASE W. RES. L. REV. 177, 185 (1999) (recognizing that lack of Supreme Court guidance led circuit courts to apply different standards for determining reliability of non-scientific evidence).

36. See *Kumho Tire*, 526 U.S. at 158 (explaining that applicability of *Daubert* and other reliability factors necessarily depends on circumstances of case). Reviewing the district court’s doubts as to the reliability of respondent’s offered testimony, the Court found that the district court did not abuse its discretion. See *id.* (reversing appellate court’s decision to reverse district court’s exclusion of expert testimony). Specifically, the Court agreed with the district court that the expert’s use of visual-tactile inspection and a multi-factor test met none of the *Daubert* reliability factors, nor any other applicable reliability factors. See *id.* at 156 (agreeing with district court’s doubts of expert’s proposed testimony about tire separation). In addition, the Court noted that *Daubert*’s reliability requirement aims to “make certain that an expert . . . employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” See *id.* at 152 (recognizing importance of reliable methodology). One commentator has noted that the Court’s focus on this factor suggests that it is an always-applicable aspect of the reliability inquiry. See Edward J. Imwinkelried, *Evaluating the Reliability of Nonscientific Expert Testimony: A Partial Answer to the Questions Left Unresolved by Kumho Tire Co. v. Carmichael*, 52 ME. L. REV. 19, 28 (2000) (advocating importance of “same intellectual rigor” factor).

37. See, e.g., Hansen, *supra* note 29, at 43 (noting that *Kumho Tire* dictates that trial court must look beyond qualification of expert and consider applicability of *Daubert* factors and other reliability factors); Mark Lewis & Mark Kitrick, *Kumho Tire Co. v. Carmichael: Blowout from the Overinflation of Daubert v. Merrell Dow Pharmaceuticals*, 31 U. TOL. L. REV. 79, 90 (1999) (remarking that *Daubert*’s applicability in *Kumho Tire* “suggests an enormously expanded role for judges”); Richard Collin Mangrum, *Kumho Tire Company: The Expansion of the Court’s Role in Screening Every Aspect of Every Expert’s Testimony at Every Stage of the Proceedings*, 33 CREIGHTON L. REV. 525, 537 (2000) (noting that “*Kumho* clearly follows the Supreme Court’s recent trend to expand judicial over jury discretion in the weighing of the relevancy and reliability of expert testimony”); Morsek, *supra* note 24, at 717 (observing that *Kumho Tire* expanded trial judge’s responsibility for evaluating reliability of non-scientific expert testimony).

further complicate matters, the Court suggested that other factors in combination with *Daubert* may apply, yet failed to indicate what these factors might be, thus leaving district courts with insufficient direction to adequately perform the reliability inquiry for non-scientific testimony.³⁸ Because *Kumho Tire* left the applicability of other factors to the discretion of the district courts, it placed both judges and practitioners in uncertain positions.³⁹

Mindful of the Court's emphasis on ensuring reliability and relevancy in the *Daubert* trilogy of cases, in 2000 Congress revised Rule 702 to incorporate the Court's interpretation of the requirements for admitting expert testimony.⁴⁰ According to revised Rule 702:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, (3) the witness has applied the principles reliably to the facts of the case.⁴¹

In the wake of the *Daubert* trilogy and revised Rule 702, district courts have diverged in their treatment of experts in products liability cases, and cir-

38. See Imwinkelried, *supra* note 36, at 29 (commenting that "*Kumho Tire* gives the trial judges less guidance than *Daubert*").

39. See SALES & SHUMAN, *supra* note 6, at 42 (remarking that *Daubert* made admissibility inquiry more practical, but lead to considerable uncertainty in its application); deVyver, *supra* note 35, at 202 (concluding that allowing trial judges to determine other reliability factors for non-scientific expert testimony will result in confusion amongst circuits).

40. See FED. R. EVID. 702 advisory committee's note (indicating that rule was revised in response to *Daubert* and *Kumho Tire*).

41. *Id.* ("The amendment affirms the trial court's role as gatekeeper and provides some general standards that the trial court must use to assess the reliability and helpfulness of proffered expert testimony."). The Advisory Committee noted that it did not attempt to codify the reliability of *Daubert* and subsequent cases. See *id.* (describing revised rule). Even so, the Advisory Committee compiled several reliability factors that are significant post-*Daubert*, such as whether the expert developed the opinion for litigation, "whether an expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion," whether the expert considered alternative explanations, whether the expert employed the same intellectual rigor in the courtroom as in the field, and "whether the field of expertise is known to reach reliable results for the type of opinion the expert would give." See *id.* (discussing possible reliability factors). The Advisory Committee noted that the failure of a single factor is not dispositive of reliability. See *id.* (affirming flexibility of trial court's Rule 702 inquiry); see also Pena, *supra* note 11, at 752-53 (commenting that Advisory Committee notes recognize district court's ability to choose from variety of reliability factors such as those suggested in *Daubert* and other factors developed in circuit courts).

circuit courts have provided guidance through varying interpretations of the standards for admissibility under the rule.⁴²

III. THE THIRD CIRCUIT THROWS ITS HAT IN THE RING AND WAITS FOR THE BALL TO DROP

The Third Circuit developed its current approach to determining the admissibility of expert testimony by intertwining the Court's instructions from *Daubert*, *Kumho Tire*, and *Joiner* in various types of cases.⁴³ Prior to the *Daubert* era, in *United States v. Downing*,⁴⁴ the Third Circuit criticized the general acceptance test and instead looked for "indications of reliability." Reversing the district court's exclusion of eyewitness expert testimony, the Third Circuit articulated several factors that district courts should consider: novelty of the expert's technique, availability of published reviews of the technique, qualifications of the expert, non-judicial uses of the technique, frequency of error in use of the technique, and use of such testimony in prior cases.⁴⁵

After the Supreme Court's decision in *Daubert*, the Third Circuit reaffirmed *Downing* in *In re Paoli Railroad Litigation*,⁴⁶ where it reviewed the district court's decision regarding the plaintiffs' experts in a toxic tort case.⁴⁷ In light of *Daubert*, the court indicated that district courts should evaluate the reliability factors in *Daubert* or *Downing*, as well as other factors relevant to the case.⁴⁸ The Third Circuit has continued to apply the rela-

42. See SALES & SHUMAN, *supra* note 6, at 107 (finding that "*Kumho* admonishes judges to admit only reliable expert information, but its lack of guidance to trial judges leaves room for other factors," and that "[t]his invites inconsistency and unfairness across trials"); see also Pena, *supra* note 11, at 764 (observing that judges determining admissibility of non-scientific testimony, particularly engineers, will frequently evaluate reliability based on factors other than *Daubert*, leading to inconsistency among courts). For a discussion of various circuits' approaches in evaluating admissibility of products liability experts under Rule 702, see *infra* notes 60-112 and accompanying text.

43. For a discussion of the Third Circuit's analysis of admissibility of products liability experts, see *infra* notes 43-96 and accompanying text.

44. 753 F.2d 1224, 1235-37 (3d Cir. 1985) (determining that *Frye* test "should be rejected as an independent controlling standard of admissibility" and instead should function as a factor in the reliability analysis).

45. See *id.* at 1238-39 (providing factors for district court to assess in evaluating reliability of expert testimony and noting that reliability inquiry "is flexible and may turn on a number of considerations").

46. 35 F.3d 717 (3d Cir. 1994).

47. See *id.* at 732 (recounting that plaintiff's expert proffered testimony on causation).

48. See *id.* at 742 (noting applicability of *Downing* and *Daubert* factors). Reviewing the admissibility decision of the district court for the first time after *Daubert*, the court found it significant that *Daubert* did not reject any of the *Downing* factors. See *id.* (detailing consistency in reliability determination). The Third Circuit recognized that *Daubert* also asks if a technique produces hypotheses that can be tested and whether there are standards controlling the technique. See *id.* (reviewing *Daubert's* suggested reliability factors). On the other hand, *Daubert* did not mention some of the *Downing* factors, such as the degree of expert qualification,

bility factors of *Daubert* and *Downing*, but in *Oddi v. Ford Motor Co.*,⁴⁹ placed special emphasis on the importance of testing. In *Oddi*, the plaintiff offered a design engineer to meet the burden of proof on his crashworthiness claim, a subset of design defect claims.⁵⁰ Affirming the district court's exclusion of the expert, the Third Circuit focused on the expert's failure to test his hypothesis regarding the design defect and his proposed alternative design.⁵¹

In addition to imparting guidance on reliability considerations, the Third Circuit has provided direction on the appropriate level of qualification of an expert.⁵² Traditionally, the Third Circuit has interpreted the qualification requirement broadly, and since *Daubert*, has repeatedly disavowed "overly rigorous requirements of expertise."⁵³ For example, in *Hammond v. International Harvester*,⁵⁴ the court upheld the admissibility of expert testimony in a design defect case by a farm equipment salesman,

the novelty of the technique, and the non-judicial uses of a technique. *See id.* (noting differences between cases). Even so, the court concluded that "[w]e now make clear that a district court should take into account all of the factors listed by either *Daubert* or *Downing* as well as any others that are relevant." *Id.* (reaffirming continued applicability of *Downing* factors as basis for reliability inquiry).

49. 234 F.3d 136 (3d Cir. 2000).

50. *See id.* at 147 (describing plaintiff's offer of engineering expert for testifying to alleged design defect in truck's front bumper after debilitating crash).

51. *See id.* at 149 (finding that expert's testimony was not based on any particular literature or testing). Criticizing the expert's explanation that he studied the truck in question to form his hypothesis, the court remarked, "[a]lthough *Daubert* does not require a paradigm of scientific inquiry as a condition precedent to the admissibility of expert testimony, it does require more than the haphazard, intuitive inquiry that [the expert] engaged in." *Id.* at 156. The court also took issue with the expert's failure to test proposed alternative designs. *See id.* (evaluating reliability of expert's proposed testimony).

52. *See, e.g.,* *Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (explaining that "[q]ualification refers to the requirement that the witness possess specialized expertise"); *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996) (declaring that "because of our liberal approach to admitting expert testimony, most arguments about an expert's qualifications relate more to the weight to be given the expert's testimony than to its admissibility"); *Hammond v. Int'l Harvester Co.*, 691 F.2d 646, 653 (3d Cir. 1982) (noting that education or experience can qualify expert).

53. *In re Paoli R.R. Litig.*, 35 F.3d 717, 741 (3d Cir. 1994) (interpreting Rule 702 as allowing "a broad range of knowledge, skills, and training to qualify an expert"); *see also, e.g.,* *Hammond*, 691 F.2d at 653 (pointing out that formal education is not requirement for qualification); *Knight v. Otis Elevator Co.*, 596 F.2d 84, 87-88 (3d Cir. 1979) (holding that expert need only be qualified on defective part in question and not entire product).

The Third Circuit declined to adopt a stricter standard in reviewing an expert's qualifications and clarified that "Rule 702's liberal policy of admissibility extends to the substantive as well as the formal qualification of experts." *Id.* This tendency to allow a variety of skills, experiences, and education to qualify an expert remained consistent in many types of cases after the promulgation of revised Rule 702. *See, e.g.,* *Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (reversing magistrate judge's decision to exclude doctor's testimony in medical malpractice case).

54. 691 F.2d 646 (3d Cir. 1982).

despite his lack of an engineering degree.⁵⁵ The Third Circuit emphasized, however, that an expert can only testify as to matters within the expert's range of qualification.⁵⁶ In *Surace v. Caterpillar, Inc.*,⁵⁷ for instance, the court determined that an electrical engineer could not testify to a design defect when his theory was based on a human's behavioral response to the equipment.⁵⁸ Whether addressing challenges to reliability or qualification, the Third Circuit has highlighted the propriety of resolving the issue before trial, but has also noted that litigants are not always entitled to a *Daubert* hearing.⁵⁹

IV. THE THIRD CIRCUIT'S BALANCING ACT IN *PINEDA* AND *CALHOUN*

A. *Setting the Stage*

The Third Circuit's decisions *Pineda* and *Calhoun* demonstrate its current approach to the admissibility of expert testimony in products liability cases, in particular the focus on qualification and reliability.⁶⁰ In *Pineda*,

55. See *id.* at 653 (determining that Rule 702 does not require that expert have formal credentials to testify).

56. See *Surace v. Caterpillar, Inc.*, 111 F.3d 1039 (3d Cir. 1997) (limiting range of topics to which expert may testify).

57. 111 F.3d 1039 (3d Cir. 1997).

58. See *id.* at 1055-56 (finding electrical engineer unqualified to testify on human safety standpoint of product because he lacked expertise on habituation).

59. See, e.g., *Oddi v. Ford Motor Co.*, 234 F.3d 136, 155 (3d Cir. 2000) (affirming district court's refusal to hold *Daubert* hearing); *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412, 418 (3d Cir. 1999) (noting plaintiff was entitled to *Daubert* hearing when factual record did not enable district court to evaluate expert testimony); *United States v. Downing*, 753 F.2d 1224, 1241 (3d Cir. 1985) ("[T]he most efficient procedure that the district court can use in making the reliability determination is an in limine hearing.").

In *Padillas*, the Third Circuit found that the district court's refusal to hold a *Daubert* hearing on the admissibility of plaintiff's mechanical engineering expert constituted an abuse of discretion because the expert's report was not sufficiently complete to permit the court to evaluate the proposed testimony. See 186 F.3d at 414 (describing basis of appellate review). The district court refused to hold a *Daubert* hearing regarding the admissibility of the plaintiff's mechanical engineer expert, despite the expert's report not explaining the methodology used to reach his conclusions. See *id.* (detailing procedural history). Finding that the failure to hold a hearing was an abuse of discretion, the Third Circuit explained that discrepancies in the factual basis of an expert's proposed testimony are properly resolved through a *Daubert* hearing. See *id.* (recounting appellate court's reasoning). Nevertheless, in *Oddi*, the Third Circuit made clear that the district court does not need to conduct a *Daubert* hearing if the evidentiary record regarding the proposed expert testimony allows the gatekeeping judge to completely evaluate reliability. See 234 F.3d at 155 (holding that *Daubert* hearing is not required when record is complete).

60. See *Schneider v. Fried*, 320 F.3d 396, 405 (3d Cir. 2003) (describing Third Circuit's focus on qualification and reliability). In addition to qualification and reliability, Rule 702 mandates that the proposed testimony be relevant and helpful to the jury to resolve an issue in the case, commonly referred to as fit. See *id.* (noting Third Circuit's interpretation of Rule 702.) In both *Pineda* and *Calhoun*, the Third Circuit did not find fit to be a dispositive issue. See *Pineda v. Ford Motor*

the plaintiff brought an inadequate warnings claim after the rear lift gate glass of a Ford Explorer shattered as he replaced the hinges.⁶¹ The plaintiff's expert offered testimony that the safety manual failed to provide sufficient instructions and warnings for installing the hinges.⁶² The district court determined that the expert was not qualified because he was not a warnings expert and his methodology was unreliable.⁶³

In *Calhoun*, the plaintiff brought design defect and inadequate warnings claims stemming from a fatal accident in which the plaintiff's twelve-year-old daughter crashed a jet ski.⁶⁴ The first expert, a doctor and specialist in human factors engineering, offered testimony that riders would accidentally squeeze the throttle as a stress reaction and that the jet ski's warnings should have included an age requirement.⁶⁵ The district court excluded the expert's testimony regarding the alleged stress reaction and the need for an age requirement in the warnings, but allowed testimony on other issues.⁶⁶ The district court limited the testimony of the plaintiff's

Co., 520 F.3d 237, 244 (3d Cir. 2008) (stating that expert's testimony must be helpful to jury); *Calhoun v. Yamaha Motor Corp.*, 350 F.3d 316, 321 (3d Cir. 2003) (commenting that expert testimony must be relevant to case). The court has emphasized, however, that proposed expert testimony must satisfy the threshold requirement of relevance to be helpful to the jury. *See Calhoun*, 350 F.3d at 321 (detailing fit requirement).

61. *See* 520 F.3d at 239-40 (describing plaintiff's allegations). On the day of the accident, the plaintiff had replaced the brackets and lift cylinders, which support the lift gate, because the lift gate would not close properly. *See id.* at 240 (describing plaintiff's repair of vehicle). As the plaintiff replaced the lift gate hinges and tightened the right side hinge, the glass shattered, severely cutting his leg. *See id.* at 240-41 (recounting plaintiff's deposition testimony). The plaintiff alleged that the lift gate glass and hinges were defective in their design, and that Ford had not provided sufficient warnings of the potentially hazardous condition. *See id.* at 241 (describing plaintiff's complaint).

62. *See id.* (reporting expert's conclusions). The expert testified that he based his design defect opinion on a comparison of warranty claims from 2002 and 2003 Ford Explorers and additionally on third-party opinions found on the Internet. *See id.* (detailing expert's bases for design defect claim). Additionally, the expert stated that the manual for replacing the lift gate glass did not include directions for reconnecting the hinges to the glass. *See id.* (setting forth basis for expert's inadequate warning testimony). Before trial, the plaintiff withdrew his design defect claim. *See id.* at 242 (noting plaintiff's decision to proceed on failure to warn claim only).

63. *See id.* (stating district court's decision to exclude expert testimony).

64. *See* 350 F.3d 316, 318 (3d Cir. 2003) (setting forth plaintiff's claims). Riding a jet ski for the first time, the plaintiff's daughter picked up speed while riding across a lagoon toward a boat. *See id.* (detailing facts giving rise to plaintiff's claims). The plaintiff's daughter appeared "frozen" and did not attempt to turn when she collided with a boat, causing massive head and neck trauma. *See id.* (describing accident). The plaintiff alleged that the jet ski was defective in design because of the similarity of its throttle to a bicycle brake and that the warnings on the jet ski were inadequate. *See id.* (describing plaintiff's claims).

65. *See id.* at 322 (recounting expert's proposed testimony that warning should have included age requirement of sixteen-years-old).

66. *See id.* (noting district court's limitation of expert's testimony). The court allowed the expert to testify about the similarity of the jet ski throttle to a brake on

second expert, whose background was in marine safety, to describing differences among jet ski models and warnings in general.⁶⁷ In addition, the district court determined that the plaintiff's third expert, a naval architect and marine engineer, could describe the jet ski's throttle, but could not testify that it was unsafe because of the similarity between the throttle and a brake on a bicycle.⁶⁸

B. *Walking the Tightrope of Rule 702's Requirements*

1. *Experience, Knowledge, or Skill Make Perfect*

Deciding the appeal in *Pineda*, the Third Circuit rejected the district court's interpretation of the engineer's qualifications under Rule 702.⁶⁹ In keeping with its liberal interpretation of qualification set forth in *Hammond*, the court found the engineer qualified to testify on the inadequate warnings claim because of his formal qualifications and his experience from working with glass.⁷⁰ The expert's lack of qualification in designing lift gates or drafting warnings did not prevent him from testifying that instructions and a warning could have corrected any engineering problem.⁷¹ The court stated that an expert is not required to be the "best

bicycle, but excluded testimony about an alleged stress reaction. *See id.* (describing bounds of expert's testimony). In addition, the district court allowed testimony about the inadequate warnings. *See id.* (same). The court prohibited the expert from opining about the proper age requirement to be included in an alternative warning. *See id.* (describing district court's restriction on expert's warnings testimony).

67. *See id.* at 323 (noting that plaintiff's second expert had experience working with jet skis as lieutenant for San Diego Marine Safety Service, but did not have formal qualifications in engineering or human factors).

68. *See id.* at 324 (detailing proposed testimony of plaintiff's third expert).

69. *See Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008) (disagreeing with district court's finding).

70. *See id.* at 245 (describing engineer's formal qualifications). The court noted that the expert's formal training was "unassailable," as he had received a Bachelor of Science and a Master of Science in Metallurgical Engineering and Material Science. *See id.* (reviewing expert's educational background). In addition, the plaintiff's expert worked in a materials engineering lab. *See id.* (describing expert's employment history). The court noted that the expert's educational background studying fracture mechanics and his extensive experience consulting on cases involving glass failure were sufficient to substantively qualify him to testify in the case. *See id.* (taking note of expert's engineering qualifications). The court reasoned that the expert could testify that a step-by-step procedure explaining the replacement of a lift gate should have been included in the vehicle's service manual. *See id.* (reviewing issues upon which expert planned to testify). Further, the expert could testify that such instructions should have contained an explicit warning of the possible safety issue. *See id.* (describing expert's testimony to prove that service manual should have alerted customers of potential safety issue).

71. *See id.* (stating that expert need not be substantively qualified in drafting warnings to testify that warning was necessary, as expert opinion did not pertain to substance of such warning).

qualified" to satisfy Rule 702's substantive qualification requirement of knowledge, skills, training, education, or experience.⁷²

The court in *Calhoun* also evaluated qualification in accordance with *Hammond*, but unlike *Pineda*, determined that the district court did not abuse its discretion by limiting the scope of expert testimony.⁷³ The court remained consistent with its holding in *Surace* that an expert is not qualified to testify to matters outside his area of expertise.⁷⁴ Finding that the first expert could describe the throttle only, the Third Circuit upheld the restriction because although the expert's qualifications formed a general basis for explaining the mechanism, the expert was not qualified to opine how a user would handle the throttle or that it was defective.⁷⁵ Regarding the plaintiff's second expert, the court found it proper to limit testimony to an explanation of the differences among jet ski models, including their accelerator mechanisms and the general construction of a proper warning.⁷⁶ The court found the expert unqualified to testify to the safety of accelerating mechanisms or to the substance of warnings because he lacked specific knowledge of the throttle being less safe than other models and had no experience in jet ski design.⁷⁷ Finally, the court restricted the plaintiff's third expert from testifying that the throttle was unsafe because he failed to examine different throttle design diagrams and therefore did

72. See *id.* (finding that expert was qualified despite not being warnings expert); see also *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996) (noting that "it is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified").

73. See *Calhoun*, 350 F.3d at 322-24 (affirming district court's restrictions on plaintiff's expert testimony). For a discussion of *Hammond*, see *supra* notes 54-56 and accompanying text.

74. See *Surace v. Caterpillar, Inc.*, 111 F.3d 1039, 1056 (3d Cir. 1997) (upholding district court's conclusion that individual without sufficient knowledge of pertinent field did not qualify as expert). For a further discussion of the findings in *Surace*, see *supra* notes 57-58 and accompanying text.

75. See *Calhoun*, 350 F.3d at 322-23 (expressing approval of district court's characterization of expert's qualifications). The court noted that "[a]n expert may be generally qualified but may lack qualifications to testify outside his area of expertise." *Id.* at 322 (stating scope of expert's qualifications). The court approved the district court's refusal to allow the plaintiff's first expert to testify that a "stress reaction" would cause a person to accidentally squeeze the throttle. See *id.* (approving district court's limitation on first expert's testimony). The expert had a doctorate in experimental psychology and was a specialist in human factors engineering. See *id.* (detailing expert's formal qualifications). Additionally, the expert worked as a human factors engineer, a field dealing with studying human tendencies that impact the design and use of products. See *id.* (describing expert's specialization).

76. See *id.* at 323 (explaining subject matter of expert's testimony).

77. See *id.* (reasoning that expert was knowledgeable about different kinds of jet skis but finding he had "neither the general background nor the specific knowledge to support his proffered testimony that the 'squeeze finger throttle' was less safe than other designs").

not apply his general qualifications.⁷⁸ Moreover, the expert's lack of experience in warnings design appropriately prohibited him from testifying to the adequacy of the warnings.⁷⁹

2. *Reliability Is Its Own Animal*

The Third Circuit's analysis of reliability in *Pineda* and *Calhoun* reflects the court's treatment of the various factors set forth in *Daubert* and *Downing* for weighing the admissibility of products liability experts.⁸⁰ The court in *Pineda* admonished the district court because it did not "demonstrate the appropriate level of flexibility required by Rule 702" in light of *Kumho Tire's* holding that the *Daubert* reliability factors may not be relevant in all cases.⁸¹ The court first determined that the expert's opinion was supported by sufficient facts due to his extensive knowledge of forces that can potentially cause glass to shatter.⁸² The expert's failure to test alternative warnings had no bearing on the reliability of his testimony that the warning was insufficient because his opinion derived from his specific knowledge of the stresses effect on glass.⁸³

Second, the court found that the expert reliably applied his knowledge to testify that the warning was insufficient.⁸⁴ Specifically, the expert's comparison between the former service manual and a subsequently issued manual ensured the reliability of his knowledge.⁸⁵ The court did

78. *See id.* at 324 (noting restriction on expert's testimony because expert unjustifiably extrapolated from his familiarity with outboard motors and motorcycles to develop opinion on jet ski throttles).

79. *See id.* (reasoning that expert's educational background qualified him to testify about mechanical issues but not warnings design).

80. For a discussion of *Daubert*, see *supra* notes 23-29 and accompanying text. For a discussion of *Downing*, see *supra* notes 44-48 and accompanying text.

81. *See Pineda v. Ford Motor Co.*, 520 F.3d 237, 248 (3d Cir. 2008) (holding district court erred in excluding expert based on failure to offer and test alternative language for warning, and for not comparing language of vehicle's service manual to those of other automobile manufacturers). For a discussion of *Kumho Tire*, see *supra* notes 34-39 and accompanying text.

82. *See id.* (examining factual basis of expert's opinion).

83. *See id.* (describing foundation of expert's testimony).

84. *See id.* (finding expert's warning opinion reliable).

85. *See id.* (noting expert's comparison between service manual at time of accident and subsequent service manual that Ford later issued). The district court ruled that Rule 407 prohibited the expert from relying on the later issued service manual. *See id.* at 246 (describing district court's restriction on basis of expert's testimony). Rule 407 provides:

When after an injury or harm . . . measures are taken that, if taken previously, would have made the injury or harm less likely to occur, evidence of the subsequent measures is not admissible to prove negligence, culpable conduct, a defect in a product, a defect in a product's design, or a need for a warning or instruction.

FED. R. EVID. 407. The Third Circuit found that the district court did not give proper attention to Rule 703. *See Pineda*, 520 F.3d at 246 (describing district court's error). Rule 703 dictates that "[i]f of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject,

suggest, however, that the expert's opinion would have been more reliable if he had additionally compared the manual to other manufacturers' manuals.⁸⁶

In *Calhoun*, the court's assessment of reliability focused on each expert's knowledge and the foundation of their opinions as indicators of reliability.⁸⁷ The court determined that it was proper to allow the first expert to describe the throttle because he had general knowledge in human factors engineering.⁸⁸ Still, in accordance with the *Daubert* reliability factors, the court found it proper to exclude the expert's testimony on the stress reaction theory because the theory was untested and it was not supported by literature.⁸⁹ Additionally, the expert's general knowledge of psychology and human factors engineering was insufficient to ensure reliability of his opinion on the proper age for jet ski use.⁹⁰

Next, in reviewing the second expert, the court expressed concern that the testimony lacked an underlying factual basis regarding design defect and inadequate warnings.⁹¹ The court reasoned that the expert's lack of statistical evidence evaluating the safety of different jet ski models precluded him from testifying as to which throttle was safest.⁹² In addition, the district court's refusal to allow the expert to opine on the substance of a warning was permissible because the expert testimony had no support.⁹³

Finally, the court found the third expert's testimony to be unreliable as well.⁹⁴ In its reliability analysis, the court criticized the expert's failure to consistently apply his knowledge to his theory that the throttle was unsafe.⁹⁵ Notably, the expert never operated the particular jet ski model in

the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted." FED. R. EVID. 703. The court found that even though the subsequently issued manual was inadmissible itself, it was reasonable for the engineer to base his warnings testimony on the manual and he should have been able to state his opinion pursuant to Rule 703. See *Pineda*, 520 F.3d at 247 (determining expert's warnings testimony should have been admitted).

86. See *id.* at 249 (suggesting reliability of expert's opinion could have been improved).

87. See *Calhoun v. Yamaha Motor Corp.*, 350 F.3d 316, 322-24 (3d Cir. 2003) (examining experts' knowledge as bases for reliability).

88. See *id.* at 322 (confirming district court's finding that expert's background provided sufficient support for his description of squeeze finger throttle).

89. See *id.* (discussing lack of studies or tests confirming expert's theory). For a discussion of *Daubert*, see *supra* notes 23-29 and accompanying text.

90. See *id.* (holding that expert required more specific knowledge to guarantee reliability of opinion).

91. See *id.* at 323 (criticizing reliability of expert's testimony because of lack of empirical evidence).

92. See *id.* (finding lack of reliability in second expert's proffered testimony).

93. See *id.* (upholding district court's restriction on expert's proffered warnings testimony).

94. See *id.* at 324 (excluding expert's testimony)

95. See *id.* (finding testimony unreliable because expert inadequately applied his expertise).

question, did not examine diagrams of other throttles used on jet skis, did not perform tests to evaluate whether alternative designs were safer.⁹⁶

C. *Marveling at the Sideshow in Other Circuits*

1. *Bending Over Backwards for Qualification*

Similar to the Third Circuit's liberal approach to qualification, other circuits also maintain flexibility in applying the gate-keeping function to an expert's qualification.⁹⁷ The Seventh Circuit, for instance, notes that an expert's testimony only has to be relevant to a factual issue in the case and does not need to be related to the ultimate issue that the trier of fact must decide.⁹⁸ Additionally, contrasting with the Third Circuit's approach in *Calhoun*, which focused on whether an expert had examined the product, the Tenth Circuit notes that an expert need not have first-hand knowledge of a particular product to give an opinion on it.⁹⁹ Despite employing a liberal interpretation of Rule 702, however, some courts still found experts to simply lack sufficient knowledge in the relevant field.¹⁰⁰

2. *All Eyes on Reliability*

Surveying the circuits' approaches to determining the factual sufficiency and reliability of expert testimony, the courts provide insight into Rule 702's requirements.¹⁰¹ With respect to the proper factual foundation, the First Circuit notes that an expert must adequately define any terms or standards used to reach the conclusion that a product is defective.¹⁰² Additionally, the Second, Fourth, Eighth, and Tenth Circuits in-

96. See *id.* (noting weaknesses in expert's opinion resulting from failure to test alleged defective product or compare it with alternative designs).

97. See Hein, *supra* note 28, at 230 ("Courts generally interpret Rule 702's expertise requirement liberally by allowing a broad range of knowledge, skills, or training to qualify an expert."); see also *Hammond v. Int'l Harvester Co.*, 691 F.2d 646, 653 (3d Cir. 1982) (taking flexible approach to qualification of expert in design defect case); *Surace v. Caterpillar, Inc.*, 111 F.3d 1039 (3d Cir. 1997) (affirming flexibility in expert qualification but maintaining that expert must stay within range of expertise).

98. See *Smith v. Ford Motor Co.*, 215 F.3d 713, 719-20 (7th Cir. 2000) (finding automotive engineers were qualified to testify despite expertise not relating to ultimate issue).

99. See *Smith v. Ingersoll-Rand Co.*, 214 F.3d 1235, 1243-44 (10th Cir. 2000) (determining that experts in human factors engineering could offer opinion on design defect claim despite failure to examine milling machine at issue).

100. See, e.g., *Hochen v. Bobst Group, Inc.* 290 F.3d 446, 452 (1st Cir. 2002) (excluding engineer's testimony because he had little knowledge pertaining to field of fire and explosions); *Alfred v. Caterpillar, Inc.*, 262 F.3d 1083, 1088 (10th Cir. 2001) (refusing expert testimony on human factors when expert admitted that his knowledge of subject came from library research obtained after he had already formed his opinion).

101. For a discussion of the circuit courts' treatment of reliability factors, see *infra* notes 102-12 and accompanying text.

102. See *Beaudette v. Louisville Ladder, Inc.*, 462 F.3d 22, 26 (1st Cir. 2006) (holding that expert's reliance on American National Standards Institute terms

struct that experts providing opinions in design defect claims must have sufficient knowledge of the product itself and how the absence of a particular mechanism would cure a defect.¹⁰³

Turning to the circuit courts' treatment of reliability, courts weigh the *Daubert* factors and other considerations in determining whether the expert has reliably applied the methodology to the case.¹⁰⁴ The First, Fifth, and Eighth Circuits stress the importance of an expert's thorough explanation of the methodology used, whether through the use of photos, in-court comparisons of alternative products, or schematic designs.¹⁰⁵ In addition, several circuits repeatedly look to whether the expert's theory has been tested and generally accepted.¹⁰⁶ Moreover, in design defect claims where an expert testifies to an alternative design, a majority of circuit courts echo the Third Circuit's approach by emphasizing the significance of the expert's testing of alternative designs.¹⁰⁷ In contrast with the Third

without providing objective criteria to evaluate terms deemed proposed testimony speculative).

103. See, e.g., *Menz v. New Holland N. Am., Inc.*, 507 F.3d 1107, 1114-15 (8th Cir. 2007) (ruling expert testimony unreliable because expert did not offer any theory regarding how proposed improvement would have remedied defect); *Black v. M & W Gear Co.*, 269 F.3d 1220, 1237-38 (10th Cir. 2001) (excluding expert's testimony that rollover protection system would not have prevented accident when expert's opinion was not based on tests or calculations specific to accident); *Brooks v. Outboard Marine Corp.*, 234 F.3d 89, 92 (2d Cir. 2000) (finding expert had not examined or seen boat containing alleged defective propeller prior to forming opinion on defectiveness); *Oglesby v. Gen. Motors Corp.*, 190 F.3d 244, 248-49 (4th Cir. 1999) (considering whether expert had familiarity with product).

104. For further discussion of courts' other considerations when examining expert methodologies, see *infra* notes 105-12 and accompanying text.

105. See, e.g., *Hodges v. Mack Trucks, Inc.*, 474 F.3d 188, 196 (5th Cir. 2006) (allowing expert testimony when expert described latch at issue in design defect claim and explained how alternative latch would be safer); *Koken v. Black & Veatch Constr., Inc.*, 426 F.3d 39, 48 (1st Cir. 2005) (determining expert's testimony was unreliable because of inability to articulate any methodology in failure to warn claim regarding fire blanket); *Babcock v. Gen. Motors Corp.*, 299 F.3d 60, 68 (1st Cir. 2002) (allowing expert testimony where expert used photos, accident seat belt, and another seat belt to explain methodology in design defect claim); *Miles v. Gen. Motors Corp.*, 262 F.3d 720, 724 (8th Cir. 2001) (noting expert's thorough explanation of design of truck and bumper).

106. See, e.g., *Pro Serv. Auto. v. Lenan Corp.*, 469 F.3d 1210, 1216 (8th Cir. 2006) (holding that expert's lack of testing on theory alleging defect in oil heater rendered testimony inadmissible); *Wagner v. Hesston Corp.*, 450 F.3d 756, 759 (8th Cir. 2006) (finding that lack of testing or general acceptance weighed against expert testimony on safety guard for baler in design defect case); *Truck Ins. Exch. v. Magnetek*, 360 F.3d 1206, 1212-13 (10th Cir. 2004) (taking issue with whether expert's theory could be tested or if it was accepted in field); *Chapman v. Maytag Corp.*, 297 F.3d 682, 688 (7th Cir. 2002) (noting expert's proposed testimony on defect of circuit breaker satisfied neither testing nor general acceptance factors); *Brooks*, 234 F.3d at 92 (criticizing expert's failure to test theory of defective gear-shift mechanism on boat propeller).

107. See, e.g., *Winters v. Fru-Con, Inc.*, 498 F.3d 734, 742 (7th Cir. 2007) (explaining benefits of testing alternative designs); *Miller v. Baker Implement Co.*, 439 F.3d 407, 413 (8th Cir. 2006) (excluding expert's testimony based on theory that cotton picker should have contained extinguisher in case of fire because of

Circuit's focus on inspecting the product, however, other circuit courts downplay the necessity of examining the product as a prerequisite for reliability.¹⁰⁸

In addition to the reliability guidelines established in *Daubert*, the circuit courts interpret the Supreme Court's holding in *Kumho Tire* to allow other reliability considerations that may denote particular significance in products liability cases.¹⁰⁹ For example, several circuits agreed with the Ninth Circuit's finding that an expert's theory developed in preparation for litigation may counsel against reliability.¹¹⁰ Additionally, the Seventh Circuit, relying on *Kumho Tire*, finds that an expert's use of the same intellectual rigor in the courtroom as in the field served as a valuable reliability indicator.¹¹¹ Similar to the Third Circuit's consideration of an expert's

lack of testing); *Brown v. Raymond Corp.*, 432 F.3d 640, 647 (6th Cir. 2005) (excluding expert testimony because expert did not test proposed alternative design in forklift design defect case); *Zaremba v. Gen. Motors Corp.* 360 F.3d 355, 357 (2d Cir. 2004) (excluding experts' testimony on alternative design of car when experts conducted no tests or calculations in support of design); *Dhillon v. Crown Controls Corp.*, 269 F.3d 865, 869-70 (7th Cir. 2001) (holding expert's testimony inadmissible because of failure to test alternative design that included rear door on allegedly defective forklift).

108. *Compare* *Calhoun v. Yamaha*, 350 F.3d 316, 324 (3d Cir. 2003) (criticizing reliability of expert testimony when expert did not examine model of product at issue), *with* *Clay v. Ford Motor Co.*, 215 F.3d 663, 669 (6th Cir. 2000) (finding engineer's testimony reliable despite not inspecting vehicle in design defect claim). *But see, e.g.*, *Shuck v. CNH Am., LLC*, 498 F.3d 868, 876 (8th Cir. 2007) (determining that expert's testimony was reliable based on observations and expertise generally when experts were unable to test relevant components of combine that was destroyed in fire); *Clay*, 215 F.3d at 675 (Ryan, J., dissenting) (asserting that failure to test vehicle rendered expert's methodology unreliable).

109. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (noting importance of expert's use of "same level of intellectual rigor that characterizes the practice of an expert in the relevant field"). For a discussion of *Kumho Tire*, see *supra* notes 34-39 and accompanying text.

110. *See, e.g., Wagner*, 450 F.3d at 759 (considering fact that expert developed his alternative designs for litigation); *Lauzon v. Senco Prods.*, 270 F.3d 681, 692 (8th Cir. 2001) (finding that although expert entered field of expertise through litigation, presence of other factors ensured reliability); *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (determining significant factor to be "whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying").

111. *See Chapman*, 297 F.3d at 688 (finding that expert did not adhere to "same standards of intellectual rigor that are demanded" in the field); *Dhillon*, 269 F.3d at 869 (determining that "failure to take any steps that would show professional rigor in the assessment of alternative designs" was most blatant reliability issue); *see also Kumho Tire*, 526 U.S. at 152 (placing emphasis on whether expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field"); J. Brook Latham, *The "Same Intellectual Rigor" Test Provides an Effective Method for Determining the Reliability of All Expert Testimony, Without Regard to Whether the Testimony Comprises "Scientific Knowledge" or "Technical or Other Specialized Knowledge"*, 28 U. MEM. L. REV. 1053, 1057 (1998) (advocating use of "same intellectual rigor" test as way to standardize courts' interpretation of reliability requirements); Lewis & Kitrick, *supra* note 37, at 92 (com-

qualification as an additional indicator of reliability, the Sixth Circuit agrees that the extent of an expert's experience in performing a technique tended to increase reliability.¹¹²

V. SUGGESTIONS FOR PRACTITIONERS JUMPING INTO THE RING OF FIRE

The inconsistency among federal courts in the wake of *Kumho Tire* created uncertainty as to which considerations are essential for expert testimony in products liability cases.¹¹³ Due to the district court's gate-keeping function, practitioners must be prepared to defend and attack expert testimony early in litigation.¹¹⁴ Although the *Daubert* decision provides a point of reference, practitioners should heed the Third Circuit's treatment of qualification and reliability to ensure a favorable result for their client.¹¹⁵

A. Read Your Programs and Know the Performers

Practitioners seeking to qualify or disqualify an expert under Rule 702 and Third Circuit precedent should consider the court's flexible approach to qualification by formal and informal methods.¹¹⁶ At the pre-trial stage,

menting that "same intellectual rigor factor" relates back to general acceptance test).

112. See *Clay*, 215 F.3d at 668 (finding expert's testimony reliable based on extensive experience in field and formal education, despite not testing product); cf. *Pineda v. Ford Motor Co.*, 520 F.3d 237, 248 (3d Cir. 2008) (considering qualifications of expert as factor in reliability analysis). But see *Clay*, 215 F.3d at 675 (Ryan, J., dissenting) (criticizing majority's emphasis on expert's qualification, rather than reliability of methodology).

113. See *Pena*, *supra* note 11, at 772 (observing that *Kumho Tire* led to inconsistency among federal courts as to what factors apply in evaluating admissibility of non-scientific expert testimony).

114. See *Lewis & Kitrick*, *supra* note 37, at 90-91 (commenting that trial judges have increased responsibility in evaluating *Daubert* factors, as well as other factors relevant to case). The Third Circuit prefers resolving issues regarding admissibility of expert testimony at the pre-trial stage. See *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412 (3d Cir. 1999) (stressing importance of in limine hearings in making reliability determination). Litigants challenging admissibility of expert testimony may do so under Rule 104(a) in the form of a motion in limine, a request for a *Daubert* hearing, or both. See, e.g., FED. R. EVID. 104(a) ("Preliminary questions concerning the qualification of a person to be a witness . . . shall be determined by the court . . ."); *Weisgram v. Marley Co.*, 528 U.S. 440, 454-55 (2000) (noting that *Daubert* issues may be raised at any point in litigation); *Mangrum*, *supra* note 37, at 543 (noting that contesting expert testimony at pre-trial stage is effective way to preserve issue for appeal); cf. STEPHEN D. EASTON, ATTACKING ADVERSE EXPERTS 309 (American Bar Association 2008) (cautioning that decision to challenge expert testimony at pre-trial stage is strategic and should be considered carefully). Practitioners seeking to admit an expert must demonstrate that the testimony satisfies Rule 702's requirements by a preponderance of the evidence. See FED. R. EVID. 104(a) (setting forth standard for court's admissibility determination).

115. See *Pena*, *supra* note 11, at 770 (noting that *Daubert* factors may not always be relevant to non-scientific experts).

116. See *Hammond v. Int'l Harvester Co.*, 691 F.2d 646, 653 (3d Cir. 1982) (stating that expert may be qualified by education or experience).

litigants should demonstrate that the proposed expert is only required to, and does in fact, satisfy (at least) one of the requirements under Rule 702: knowledge, skill, expertise, training, or education.¹¹⁷ Practitioners opposing qualification should closely examine an expert's curriculum vitae to expose weaknesses and contest the proposed expert's skill as applied to the case.¹¹⁸

In inadequate warnings claims, litigants should emphasize that an expert need not be a warnings expert or have experience in drafting warnings to testify to the inadequacy of warnings, as emphasized in *Pineda and Calhoun*.¹¹⁹ Experts in design defect claims should exhibit proficiency in the relevant field by demonstrating knowledge of the product itself or at least of a design.¹²⁰ Moreover, practitioners seeking to qualify such an expert should stress that the expert does not have to be an expert on the product, but rather can apply the necessary knowledge in forming testimony.¹²¹ Litigants opposing an expert in design defect cases should point out that even if an expert may be qualified to describe a product, the expert may not have the specialized knowledge needed to explain an alleged defect, thus overstepping the bounds of qualification.¹²² In addition, experts testifying in design defect cases about potential alternative designs must exhibit proficient knowledge of such designs.¹²³

At the district court level, litigants aiming to qualify an expert for trial should emphasize the Third Circuit's consistent recognition that an ex-

117. See FED. R. EVID. 702 (setting forth bases for qualifications of experts).

118. See EASTON, *supra* note 114, at 325 (advising practitioners to remind court that "liberality of Rule 702 may require judges to exercise increased caution when evaluating the credentials of expert witnesses"); see also KUHNE, *supra* note 5, at 109 (recommending that careful examination of expert's curriculum vitae allows practitioners to "question either the expert's qualifications for serving in the case or the expert's methodology in arriving at the opinions expressed").

119. See *Pineda v. Ford Motor Co.*, 520 F.3d 237, 245 (3d Cir. 2008) (finding that expert was required to be warnings expert to testify that manual should have contained warning); *Calhoun v. Yamaha Motor Corp.*, 350 F.3d 316, 322-24 (3d Cir. 2003) (restricting expert's testimony on substance of warnings because experts were not warnings experts, but allowing testimony on warnings in general).

120. See EASTON, *supra* note 114, at 325 (cautioning that practitioners should not rely on fact that an expert has previously been qualified as expert witness). For a compilation of cases stressing the importance of expert testing of alternative designs, see *supra* note 107.

121. See DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY 457 (2006) (noting that frequent attacks on expert testimony involve argument that proposed expert is not expert on particular product, so practitioners should emphasize that expert has expertise to study product and perform tests, even if not expert on product itself).

122. See EASTON, *supra* note 114, at 323 n.41 (commenting that engineers in products liability cases are often subject to exclusion by testifying beyond expertise); see also FAIGMAN, *supra* note 121, at 460 (noting that "whether the proposed testimony extends beyond the zone of established expertise" often leads to disqualification of experts).

123. See *Calhoun*, 350 F.3d at 324 (determining that expert neither tested nor gained familiarity with alternative designs for jet ski throttles).

pert does not need to be the best expert, but must only satisfy the requirements of Rule 702.¹²⁴ If unsuccessful in excluding an expert at this stage, litigants may still vigorously attack the expert's qualifications on cross-examination.¹²⁵ On appeal, litigants whose expert's qualifications are challenged should underscore the Third Circuit's liberal approach to admissibility, as well as its deferential review of district court decisions.¹²⁶

B. *Reliability Is the Main Event*

To demonstrate the "sufficient facts or data" requirement of Rule 702 in light of Third Circuit precedent, practitioners should highlight the factual support for an expert's testimony.¹²⁷ Specifically, litigants should have the expert define key terms and demonstrate the factual basis underlying the opinion regarding the product itself and alternative designs.¹²⁸ As set forth in *Pineda*, however, an expert's knowledge can form the basis of an opinion.¹²⁹ Thus, practitioners should be mindful of any gaps in the expert's proposed testimony to attack the factual source of an opinion.¹³⁰

As the majority of Third Circuit cases have centered on reliability concerns, practitioners must be prepared not only to demonstrate the presence of any relevant *Daubert* and *Downing* factors, but also any other pertinent reliability considerations.¹³¹ In light of the Third Circuit's em-

124. See, e.g., *Pineda*, 520 F.3d at 245 (finding that expert "should have been qualified as an expert even though he may not have been the 'best qualified' expert or did not have the 'specialization' that the District Court deemed necessary"); *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996) ("[I]t is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to . . . have the specialization that the court considers most appropriate.").

125. See Patrick E. Dougherty, *CROSS-EXAMINING THE EXPERT WITNESS* 102 (2001) (describing methods of attacking qualifications of adverse expert).

126. See, e.g., *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 139 (1997) (determining that district court's admissibility ruling should only be reversed when there is abuse of discretion); *Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (interpreting qualification requirement broadly).

127. See *EASTON*, *supra* note 114, at 340-41 (noting possibility of exclusion of expert testimony due to factual mistakes or incomplete factual basis); *Mangrum*, *supra* note 37, at 545 (advising that "[c]ounsel must make every effort to provide adequate factual support for expert testimony whenever challenged in a *Daubert* hearing"). For a discussion of the sufficient facts or data requirement, see *supra* notes 101-03 and accompanying text.

128. See *Beaudette v. Louisville Ladder, Inc.*, 462 F.3d 22, 24-26 (1st Cir. 2006) (holding that expert's reliance on standard terms without providing objective criteria to evaluate terms deemed proposed testimony speculative); see also *EASTON*, *supra* note 114, at 343-44 (noting that experts in products liability cases are often excluded due to speculation without factual foundation).

129. See *Pineda*, 520 F.3d at 248 (determining expert's specialized experience in studying forces exerted on glass formed basis of opinion).

130. See *KUHNE*, *supra* note 5, at 110-11 (recommending that practitioners "reveal any deficiencies or inaccuracies in the underlying facts or data").

131. See *Lewis & Kitrick*, *supra* note 37, at 92 (advising practitioners to develop proficiency in theory underlying expert's testimony to meet reliability challenges).

phasis on testing in *Oddi* and *Calhoun*, practitioners should highlight tests the expert performed in forming the testimony, especially for demonstrating feasibility of alternative designs in design defect cases.¹³² An expert in an inadequate warnings case testifying that a warning was insufficient may compare subsequently issued warnings and those of other manufacturers.¹³³ An expert who proposes to testify to the contents of an alternative warning, however, must show some additional support for such a claim.¹³⁴

Furthermore, practitioners should accentuate an expert's qualifications given that the Third Circuit instructs that an expert's qualifications also serve as an indicator of reliability.¹³⁵ Although the Third Circuit's reliance on qualification as an indicator of reliability may actually muddle *Daubert's* holding, practitioners can use this factor to support or criticize the trustworthiness of an expert's testimony.¹³⁶ Practitioners advocating for or against the reliability of an expert's testimony should additionally look to *Kumho Tire's* consideration of whether the expert employed the "same level of intellectual rigor" as an expert in the field.¹³⁷ Practitioners

132. See, e.g., *Calhoun v. Yamaha Motor Corp.*, 350 F.3d 316, 322-24 (3d Cir. 2003) (criticizing experts' failure to test jet ski accelerating mechanisms or alternative designs); *Oddi v. Ford Motor Co.*, 234 F.3d 136, 156 (3d Cir. 2000) (finding expert's failure to test either of his design defect hypotheses contributes to determining testimony unreliable); see also EASTON, *supra* note 114, at 331 (observing that many courts consider testing most important factor in analyzing reliability); FAIGMAN, *supra* note 121, at 473 (remarking that testing has become critical reliability factor in products liability cases, especially in cases based on proposed alternative designs).

133. See *Pineda*, 520 F.3d at 248-49 (allowing expert to compare subsequently issued service manual).

134. See *Calhoun*, 350 F.3d at 323 (ruling that expert could not testify to substance of warnings due to lack of support for testimony).

135. See, e.g., *Pineda*, 520 F.3d at 248 (recognizing expert's qualification ensured reliability of his opinion about forces exerted on glass); *In re Paoli R.R. Litig.*, 35 F.3d 717, 742 (3d Cir. 1994) (noting impact of expert's qualification on assessment of reliability); *United States v. Downing*, 753 F.2d 1224, 1239 (3d Cir. 1985) ("The qualifications and professional stature of expert witnesses . . . may also constitute circumstantial evidence of the reliability of the technique.").

136. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 593 (1993) (focusing suggestions of reliability analysis on expert's methodology rather than his qualifications); see also FAIGMAN, *supra* note 121, at 471-72 (cautioning that "[c]ourts are prone, especially with engineering experts, to find value in experience," and stating that this inclination is dangerous because "experience alone does not explain why the proffered opinion is reliable"); SALES & SHUMAN, *supra* note 6, at 72 (observing that reliance on expert's qualification as basis of reliability harkens back to pre-*Frye* and pre-common law approach to admissibility of expert testimony).

137. See *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (mentioning "same intellectual rigor" factor); see also Imwinkelried, *supra* note 36, at 23 (proposing additional reliability factors of "empirical studies indicating that the expert can make the relevant decision more reliably than lay triers of fact, and second, evidence that groups other than the proponents of the discipline generally rely on the theory or technique").

may also highlight whether the expert developed the testimony for litigation.¹³⁸

VI. CURTAIN CALL

In the era following the *Daubert* trilogy, the Third Circuit has acted like a circus ring leader in applying Supreme Court precedent to experts in products liability cases, as well as directing the district courts in performing the gate-keeping function.¹³⁹ As a result, the Third Circuit has developed an approach to qualification and reliability that implements precedent, yet reflects the realities that specifically impact expert testimony in products liability cases.¹⁴⁰ The Third Circuit's teachings are especially significant considering the unlikelihood that the Supreme Court will revisit this specific issue.¹⁴¹ Although expert testimony necessarily depends on the particular facts of a case, practitioners should be cognizant of the Third Circuit's treatment of products liability experts, or risk termination of their cases before the jury ever sits.¹⁴²

Jennifer E. Burke

138. See, e.g., *Wagner v. Hesston Corp.*, 450 F.3d 756, 759 (8th Cir. 2006) (summarizing district court's finding that motivating purpose of litigation preparation weighs against admissibility of experts' tests); *Lauzon v. Senco Prods.*, 270 F.3d 681, 692 (8th Cir. 2001) (stating that "[a]n expert's finding that flows from research independent of litigation is less likely to be biased"); *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (noting that expert testimony has greater persuasiveness when based on preexisting research as opposed to research prepared exclusively for litigation). But see FAIGMAN, *supra* note 121, at 469 n.5 (noting that significance of litigation-driven testimony in products liability cases is questionable, as reliability factor considering majority of engineering expert testimony necessarily focuses on products and is only relevant in litigation).

139. See *Kumho Tire*, 526 U.S. at 150 (holding that "we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*"); see also Pena, *supra* note 11, at 764 (commenting that *Kumho Tire* created uncertainty and inconsistency among lower courts pertaining to applicability of reliability factors to non-scientific expert testimony).

140. For a discussion of the Third Circuit's treatment of expert testimony in products liability cases, see *supra* notes 43-112 and accompanying text.

141. See *Oddi v. Ford Motor Co.*, 532 U.S. 921, 921 (2001) (denying certiorari of Third Circuit case).

142. For a discussion evaluating the implications of exclusion of expert testimony in products liability cases, see *supra* note 4 and accompanying text.